wards, and closing them against farther admissions. Erysipelas was prevalent in the surgical wards at the time.

In the following year, the wards were re-opened, soon after which, three cases of the disease occurred in rapid succession.—They, however, were of a milder form, the pain and inflammation appearing to be more local and circumscribed.

The late Dr. James was in attendance at the time. His practice was to bleed moderately in the beginning, and then to give calomel and opium in repeated doses, until the gums were touched. Two of these three cases recovered, and one died.

Dr. Henry H. Smith stated, that while in Paris, several years ago, an epidemic of puerperal peritonitis broke out in the lying-in ward of the Hopital de l'Ecole de Medicin, under the care of Cloquet; erysipelas prevailed at the same time in the surgical wards of Dubois, situated a short distance from the lying-in department. Cloquet relied chiefly on calomel and opium, and mercurial frictions, pushed so as to induce speedy salivation.

While the epidemic prevailed, most of the children born in the institution were still-born, or died soon after birth with peritonitis. Dr. Smith saw several of these examined—and observed that the inflammation was confined to the peritoneum lining the abdominal parieties. It was supposed by some of the French pathologists, that the inflammation had extended, in these infantile cases, along the veins of the chord, and was thus communicated to that portion of the peritoneum.

In the adult cases, which Dr. S. had seen examined, pus was found in the veins of the uterus—and in one case, he saw it in the vena cava.

During Dr. Smith's residence in the Pennsylvania Hospital, in the years 1837 and 38, erysipelas made its appearance in the surgical wards; and although every means were employed to prevent it, two cases of puerperal peritonitis appeared in the lying-in ward. These were bled freely, and placed upon calomel and opium, until the gums were made sore. One case recovered, and the other died.

At a subsequent meeting, in answer to the queries of several of the Fellows present, Dr. Condie stated, that very few cases of puerperal fever had occurred, in the southern districts, for some time after the meeting of the College in May, and it was hoped that the disease had entirely ceased; in the latter part of June, however, a few cases had again appeared, in two of which death very speedily ensued. Dr. C. did not see these cases, but is informed by the gentleman in whose practice they had occurred, that the disease did not make its appearance in any one of them until a week or more subsequent to parturition, and when the females appeared to be, in all respects, doing well. In both the fatal cases, the attack could be referred to the ordinary exciting causes of fever in the parturient state. The symptoms differed in nothing from those by which the cases that occurred in April were distinguished. Dr. C. is not aware that an autopsical examination was made in either.

ART. XXVII.—*Third Annual Report of the Registrar-General of Births, Deaths, and Marriages in England.* London, 1841: pp. 362, 12mo.*

THIS volume comprises a general abstract of the number of births, deaths, and marriages registered during the year ending June 1840, together with details of exceeding interest to the professional and general reader relative to the mortality in different districts in England and Wales, at different ages, from various sources. We shall proceed to cull some of the interesting particulars, and merely refer to others which our limits will not allow us to copy.

The sums total of births, deaths and marriages which took place in the teeming populations of England and Wales in the year 1839–40, were as follows:—Births, 501,589; deaths, 350,101; marriages, 124,329. The mean population in 1838–39 was computed at 15,666,800 of souls, increasing in 10 years at the rate of 16 per cent., or about 1½ (1.6) per cent. per annum.

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* For notices of the first and second reports, see the Nos. of this Journal for Jan. 1841, p. 192, and for July 1841, p. 155.

A preponderance is observed in the number of births registered in the half years of 1839–40, terminating in June. Should this be a general law, it will show a prevalence of influences regulating conceptions, the reverse of what is observed in Philadelphia, where the greatest amount of births always corresponds to the last half of the civil year.* Whether this difference is to be ascribed to social customs, or peculiarities of climate, may afford a subject for discussion. The proportion of male over female births is a little over 5 per cent. in the counties, and a little under 4½ per cent. in the metropolis. Comparing these results with those observed in the United States, peopled with the same original stock, we find in the latter a very striking increase in the preponderance of male over female births. In the city of Philadelphia, for example, the males at birth exceed the females more than 7 per cent., whilst in the country parts of America, the excess increases to at least 10 per cent.†

The number of marriages annually is about in the proportion of 8 to every thousand of the population. The proportion of marriages under 21 years of age to the whole number married at all ages, is 4.90 per cent. of males, and 14.40 per cent. females. The greatest amount of early marriages occur in the south midland counties of Hertford, Bedford, Cambridge, Huntingdon, Northampton, Leicester, and Essex.

In considering the subject of marriages, the opportunity is taken to throw light upon the subject of education, with respect to writing, among the adult population of England and Wales, by showing the proportion per cent. in the metropolis, in each English county, and in North and South Wales, of persons married in the year ending June 30th, 1840, who, instead of writing their names in the marriage register, have signed with marks. It appears, from the table given, that in 13 English counties, in the West Riding of Yorkshire, and in Wales, more than 40 per cent. of the men married did not write their names; and that in 19 English counties in the West Riding of Yorkshire, and in Wales, the same fact existed with respect to more than half of the women. In the whole of England and Wales, out of 124,329 couples, there were 41,812 men and 62,523 women who, it is presumed, either could not write, or wrote very imperfectly. The proportions for the metropolis were respectively 12 per cent. of the men, and 25 per cent. of the women. The general average ages of marriage was for the males about 27 years, and for the females 25 years.

Thus much we cull from the report of the Registrar-General, T. H. Lister, to the Secretary of State for the Home Department, the Marquess of Normanby. The most interesting topics and details for the professional reader are contained in the "*Appendix*," which constitutes about 300 pages out of the 362 of which the volume consists. This appendix is in the form of a letter addressed by Wm. Farr, Esq., to the Registrar-General, relating to the *causes of death in England and Wales.*

It appears, that of the whole mortality, the number of deaths from the class of epidemic, endemic, and contagious diseases, was 65,343, and mean rate of mortality per 1000 by this class was 4.25; in 1838, it was 4.52.

"The decrease was in small-pox and typhus, 16,268 persons having died of small-pox in 1838, and 9131 in 1839; 18,775 of typhus in 1838, and 15,666 in 1839. On the other hand, 6514 children died of measles, and 5802 of scarlatina, in 1838; while 10,937 died of measles, and 10,325 of scarlatina, in 1839. Hooping-cough declined. Croup, thrush, diarrhœa, dysentery, cholera, influenza and erysipelas remained stationary; none of them assumed the epidemic form. Ague rose from 44 to 95. In 1838, 16 males and 8 females died of hydrophobia; in 1839, 11 males and 4 females perished in the same way. Out of a population of 100,000 of each sex, 432 males and 418 females died of the epidemic class of diseases; but when the comparison is instituted between the *deaths* alone the proportions are reversed; in 100,000 deaths of males 19,368, and in 100,000 deaths of females, 20,189 were from the same class of diseases.

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* See Amer. Journ. Med. Sci., vol. ix. p. 24.

† Vid. Amer. Journ. loc. cit.

"The mortality from diseases of the *nervous system* was 3.2 in a population of 1000 (500 of each sex): in 1838 the mortality by every disease of this class, except epilepsy, insanity, and delirium tremens, was higher. From an accidental circumstance, too many deaths are ascribed to chorea in the present Abstracts; the proportions were very nearly the same as in 1838. The diseases of the nervous system were 25 per cent. more fatal to males than to females, the rate of mortality among males having been 3.6, among females 2.8 in 1000.

90,565 persons died by diseases of the *respiratory organs;* the class comprises 27 per cent. of the deaths; and 59,559, or 18 per cent. of the deaths, the causes of which are specified, were by consumption. At the adult age, when consumption chiefly prevails, the numbers of men and women living are nearly equal, yet 31,543 females and 28,106 males died of this disease. The annual rate of mortality by consumption was, males .003722, females .004015; in 1838 it was, males .003783, females .004077, denoting a slight decrease, which was more obvious in the other diseases of the class. 659 deaths were ascribed to quinsy. This augmentation in the inflammatory affections of the throat was probably connected with the epidemic of scarlatina.

"The number of cases registered as *diseases of the heart*, or of the *organs of circulation*, increased from 3562 to 3788.

"20,767 persons are returned as having died by diseases of the *digestive organs*, namely, 3990 by diseases of the liver, 29 by diseases of the spleen, 4 by diseases of the pancreas, and 16,744 by diseases of the stomach and intestines. The mortality from this class was 1.351 in 1000; it was 1.287 in the year preceding. If we add the deaths from thrush (1019), diarrhœa (2562), dysentery (537), and cholera (394), to the class, it will make 25,279, which is to the deaths by diseases of the respiratory organs (90,565), after adding to them 8165 deaths by hooping-cough, 4192 by croup, and 887 by influenza, nearly in the proportion of 1 to 4.

"Diseases of the *skin and integumentary system* destroyed 420 persons in 1838, and 448 in 1839. The exanthematous fevers, with eruptions on the skin—small-pox, measles, scarlatina, and erysipelas—proved fatal to 29,787 persons in 1838, and 31,533 in 1839: when half the number (15,666) died of typhus, which is generally accompanied by rose spots upon the skin, petechiæ, or ulcerations of the intestinal glands of Peyer.

"1275 males, and 259 females, died of diseases of the *urinary organs;* the rate of mortality was, males 169, females 33, in 1,000,000.

"*Child-birth* was fatal to 2915 women; out of 1,000,000 females living, 368 died by this cause in 1838, and 372 in 1839. About five births in 1000 are fatal to the mother. It is to be regretted that no sign of diminution is perceptible in this class of deaths.

"Diseases of the *joints, bones, and muscles* destroyed 1098 males, and 922 females. White swelling, lumbar abscess, and other scrofulous affections, constituted a considerable number of the cases.

"The deaths registered as 'Inflammation,' without any specification of the part affected, amounted to 5816 in 1838, and 4940 in 1839. The decrease denotes an improvement in the registration, for the term is vague and highly objectionable. If the existence of inflammation has been ascertained, the part affected must be known, and should be stated. The mortality from dropsy and hemorrhage was less; from cancer greater than in 1838. The head "Debility" comprises premature births, and the cases of infants who died within a few hours after birth without any very apparent cause. Our knowledge of the diseases of infants, and of old people, is still imperfect; and, it is exceedingly probable, that as the science of pathology advances, the deaths from "debility" and "old age," which amounted in 1839 to 15,143, and 35,063, will undergo considerable diminution."

Violent deaths.—The number classed under this head for 1839, is 11,980, the proportions at different ages, in different parts of the country, and at different seasons being about the same as in the previous year.

In England and Wales, about 2400 persons are drowned every year, in addition to about 1000 lives estimated to be annually lost by shipwreck in sailing vessels alone.

Burns, from their clothes taking fire, are the most common causes of violent deaths in females; 77 males and 159 females (two-fifths of the females who perished by violence), died of burns in the metropolis.

The tendency to commit suicide appears to increase up to the age of 60, and to be then three times as great as at the age of 25. The greatest number of suicides occurred in the spring and summer, when crimes attended by violence, and attacks of insanity are also most common. The general rate of mortality from violence ranges from 509 to 1015 in 100,000, the highest rate being in the mining and manufacturing districts, the lowest in the agricultural districts. The metropolis occupies an intermediate place. The mortality of males by violent deaths is as 26 to 10 females, and the tendency to suicide nearly in the same proportion. Exclusive of suicides and deaths at sea, about 4367 men in the prime of life are cut off every year in England by injuries and accidents of various kinds.

On the authority of Mr. Curling, one of the surgeons of the London Hospital, 2445 patients were admitted in 1839, on account of accidents, of which number 129 died, the mortality being 1 in 19. Nearly 12 men in 10,000, (exclusive of sailors and soldiers,) aged 20 years and upwards, died violent deaths in the metropolis, and from the best estimate that can be made from the recorded verdicts, 5 of the 12 were suicides. One in 2000 men committed suicide in the year. The tendency to commit suicide is least among persons who carry on occupations out of doors; and greatest among artisans who are weakly from birth, and confined in doors, have their rest disturbed, or have little muscular exercise.

"Taking the numbers as they stand, 1 in 9332 masons, carpenters, and butchers committed suicide in the year; and 1 in 1669 tailors, shoemakers, and bakers: the tendency to suicide in the first class was as 1.0 to 5.6 in the second. The corrected mortality from suicide was 1.33 to 10,000 in the first class, and 7.43 to 10,000 in the second class. The requisite correction will be made, without further notice, in the subsequent rates. It does not affect the *relative* mortality of different classes.

"A similar result is obtained by comparing the suicides in the class of labourers with those among artisans and tradespeople; for the tendency to suicide is twice as great among artisans as it is among labourers.

"The proportion of suicides in the miscellaneous class, designated by Mr. Rickman, '*capitalists, bankers, professional and other educated men*,' is very near the average.

Numbers.	*Suicides.*	*Other Violent Deaths.*	*Suicides in* 10,000
55,853	22	23	4.9

"The subjoined entries were referred to this head, which is not very clearly defined.

"It has been remarked by theoretical writers who appear to have had this class principally in view, that suicide is most prevalent in countries where the greatest number of people are educated; and M. Brouc, after an elaborate inquiry, lays it down as a 'social law,' that suicide is most common where education is the most diffused; that suicides and scholars increase in the same ratio. Modern education and literature, it is said, have led to an increase in the number of suicides.* In England suicide is, in fact, most frequent in the metropolis, the south-eastern counties, and the northern counties, where the greatest number can write: and it is the least frequent in Wales. The intermediate counties range from 62 to 48, who could write, in 100; the suicides from 4.5 to 6.8 in 100,000.

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* Considérations sur les Suicides de nôtre époque. Par M. Brouc, *Annales d'Hygiène*. Tome 16, p. 223.

"There is a general, but no constant relation between the state of education thus tested, and the commission of suicide. It may be admitted that there is some relation between the development of the intellect and self-destruction; but the connection must be in a great measure indirect and accidental. In opposition to the arguments derived from agricultural districts, and labourers in towns, there is the fact that suicide is more frequent among several classes of artisans, than it is among better educated people. If the progress of civilization is to be charged with the increase of suicide, we must therefore understand by it the increase of tailors, shoemakers, the small trades, the mechanical occupations, and the incidental evils to which they are exposed, rather than the advancement of truth, science, literature, and the fine arts.

"A comparison of the suicides among servants and the preceding class would throw some light on the influence of mental cultivation. But servants, comprising coachmen, cannot be distinguished from street coach-drivers in the registers,—so that the two classes must be referred to one head; standing in point of education, however, nearly on a level.

"In corroboration of this result, it may be stated that about 2.0 in 10,000 persons assured in the Equitable Society, ard 7.8 in 10,000 Dragoons and Dragoon Guards, have been ascertained to commit suicide every year.*

"Of 26,665 paupers, and others not included in the previous classes, 9 committed suicide, or, with the correction, 4 in 10,000. It does not appear from the registers, that either poverty or riches have any great disturbing influence on the tendency to suicide. The influences of their attendant evils are nearly equal. The poor man has an average standard of enjoyment which he can scarcely fall below, and is less exposed to cruel reverses than the affluent; who are, on the other hand, assured, by the abundance of their resources, against the frequent fluctuations in the supply of the primary necessaries of life.

Intemperance and suicide, as well as other violent deaths, are found associated in the registers; and the professions peculiarly addicted to drunkenness have more than the due proportion of suicides. Drunkenness leads to this; but drunkenness is a sort of indirect suicide, and both are tendencies of the mind, indulged often from the same motives, and promoted by similar causes; for in drunkenness the wretched find not only the gratification of an appetite, but the suspension of natural consciousness—in death they seek its cessation.

"There is no reason to believe that suicide has been latterly increasing in England. The fact, nevertheless, that 1000 persons are ascertained to commit suicide yearly, and that nearly as many more are returned as drowned, &c., in which the verdicts do not state whether death was accidental or suicidal, is sufficient to arrest attention on all the relations of the question.

"Some plan for discontinuing, by common consent, the detailed, dramatic tales of suicide, murder, and bloodshed in the newspapers is well worthy the attention of their editors. No fact is better established in science than that suicide (and murder may perhaps be added) is often committed from imitation. A single paragraph may suggest suicide to twenty persons; some particular, chance, but apt expression, seizes the imagination, and the disposition to repeat the act, in a moment of morbid excitement, proves irresistible. Do the advantages of publicity counterbalance the evils attendant on one such death? Why should cases of suicide be recorded at length in the public papers, any more than cases of fever? It would be out of place to refer here to the moral or strictly medical treatment; but it may be remarked, that the artisans most prone to suicide are subject to peculiar visceral congestions—that suicide is most common in unhealthy towns—and that the influence of medicine on the mind, and on the unstable ungovernable impulses which are often the harbingers of suicide—is incontestable. To place the shoemaker, tailor, baker, or printer in the same favourable circumstances with respect to air and exercise as carpenters and masons would be impossible. But the workshops of all artisans admit of immense improvements in ventilation. Cleanliness is greatly neglected. Neither the men nor all the masters appear to be aware that the respiration of pure air is indispensable; that the body requires as much especial care as the tools, instruments, and machines, and that without it, neither the body nor the mind can be preserved in health and vigour. The new parks and public walks will afford the artisan an opportunity of refreshing his exhausted limbs and respiring the fresh air; and the health and temper of the sedentary workman may be much ameliorated by affording facilities in towns for athletic exercises and simple games out of doors, which, while they bring the muscles into play, unbend, excite, and exhilarate the mind. Moral causes, and the regulation of the mind, have perhaps more influence on the educated classes; but all must derive benefit from out-door exercise.

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* Tables of Equitable Society, 1834, p. 29. Army Statistical Reports, 1839, "The United Kingdom," p. 7.

"The mortality of males aged 20 from other violent deaths was 6.77. As a general rule the suicides were most numerous in the trades least exposed to accidents; as if the mind, left unexcited by natural dangers, imagined and created causes of death. Three in 10,000 tailors, bakers, shoemakers, and 9 in 10,000 masons, carpenters, and butchers, were killed by accidents or violence, the reverse of the proportions in suicide. The degree of danger which besets the different classes of the community in their occupations, is shown by the following facts.

"Eighty-six sailors, watermen, or fishermen, died violent deaths. As the number of seamen cannot be ascertained until the returns of the census are made up, the mortality by violence among them cannot be calculated. It was undoubtedly higher than in any of the preceding classes. The occupation of engineer is at present the most dangerous followed; 21 engineers, stokers, and firemen, were killed in one year in the metropolis, and that chiefly in the steam-vessels on the Thames."

It is a question of some interest whether the proportion of deaths by violence is greater or less than in former times. In the investigation of this subject, Mr. Farr refers to the London bills of mortality to furnish data from which some approximation to the proportion of deaths by violence to the deaths from all other causes, may be ascertained so far as the metropolis is concerned, from the middle of the 17th century.

"In the first period (1647 to 1700) the annual rate of mortality was about 7, in the second 5.2, in the third 5, in the fourth 3 per cent.; whence it may be deduced that, in the 17th century 6.8 in 100,000, in the 18th century 5.4, in the 19th century 5, died violent deaths. Out of a given amount of population, the deaths by drowning increased in the latter half of the 18th century; the deaths by scalds and burns were twice as great in 1800—1830 as in the 17th century. The tendency to suicide remained nearly stationary; so did death by poisoning. All the deaths by personal violence rapidly decreased. In a population of 100,000, according to these accounts, about 23 were killed, 4.6 murdered, in the 17th century; in the 18th century about 13 were "killed," and 0.5 were murdered. The chance of being murdered diminished nine-fold. The executions were more frequent in the latter half than in the beginning of the 18th century, compared with the population within the Bills of Mortality; they were not, however, half so frequent in the first 30 years of the 19th century as in the latter half of the 18th century, when about 7 were executed annually to a population of 10,000. Relatively to the murders the number of executions increased.

"It is scarcely necessary to say that few criminals are now punished capitally."

A comparison of the deaths from violence in four of the great states of Europe shows the largest proportions in England and Sweden. Prussia exhibits a much lower proportion, and France but little more than half that of Prussia. But the number of suicides is far greater in France, and still larger in Prussia.

Thus the proportion of violent deaths in 100,000 of the population of Sweden (1810 to 1830) was 67.7, the suicides comprising 5.1; in England and Wales (1838, 1839) 74.5, the suicides being 6.4; in Prussia (1820 to 1834) 48.6, the suicides constituting 9; in France (1839) 26.8, the suicides being 8. In regard to this comparison, Mr. Farr observes—

"Neither the Prussian nor French returns appear to comprise deaths by homicide, which would not, however, affect the results to any great extent. The French returns are evidently defective; they profess to give all the accidental deaths which came to the knowledge of the minister of justice, who is not paid on the same principle as the coroners of this country. If, instead of 27, we admit that, exclusive of homicide, 37 in 100,000 Frenchmen met their deaths by violence in the year, this will make little more than half the mortality by violence in England; where, after every deduction has been made for defects in the foreign returns, the mortality by violent deaths is greater than in Sweden, Prussia, France, and probably any nation of Europe, in which civil war is not raging.

"The reason of this is explained by the preceding analysis, without implying any extraordinary negligence. Relatively to the population of England, few countries have such an extent of coast, rivers, and canals. or so many men employed in navigation; so many fires, furnaces, and chemical processes in operation; medicines and poisons distributed in so many shops; so many mines, manufactures, or buildings; so many horses, carriages, and railways; such a vast amount of force of every description at its disposal. The great number of violent deaths in England may, therefore, be accounted for on the assumption that the danger in the manufactures, mines, and conveyances, is the same as in other countries; but that the frequency of exposure to it is greater."

Murders.—The murders registered in two years amounted to 156, 103 of which were males, and 53 females. Of 148 persons murdered, 78 were aged 20 and upwards. If infants be excluded, the greatest proportion of murders occurred in Lancashire and Cheshire; the smallest proportion in Essex, Suffolk, and Norfolk.

Lightning.—Twenty-five persons (18 males and 7 females), were killed by lightning in 1838, and 18 (14 males and 4 females), in 1839. In the last two quarters of 1837, *fifteen;* and of 1838, *fourteen;* and of 1839, only *two* deaths were caused by lightning. In the two years 1838-9, 1 of the deaths occurred in May, 26 in June, 8 in July, 4 in August, 2 in September, and 2 in November. *Six* was the greatest number killed in one storm, which happened on the 18th of June, 1839; and it is a curious coincidence that *four* persons were struck dead by lightning on the 18th of June, 1838.

"The danger of being struck by lightning is comparatively not very great; for only 22 are killed by this cause in the year, while 29 die other violent deaths *daily*, exclusive of suicides. Of a million men at the age when they are most exposed (30–50), not more than 4 were struck dead; while the proportion of women was less (1.5). During the thunder-storm, however, the danger of death by lightning is probably twice as great as the danger at that time from all the other causes of violent death put together. Franklin wrote popular directions as to the best means of protection in storms, but it appears from M. Arago's interesting paper,* that natural philosophers are not agreed altogether in admitting their propriety. Unless there is something in the structure or dress of men which marks them out in a special manner as victims of the lightning, it may be inferred from the facts in the registers that people are safest in-doors when it lightens; and that women and children are placed in the circumstances where there is least danger."

Sudden Deaths.—Of the deaths reported under this head by the verdicts of the coroners' juries, nearly 2 out of 3 have no cause stated.

"Apoplexy was said to be the cause of 53 deaths, diseases of the heart and arteries of 28, exclusive of 10 ascribed to a rupture of a blood-vessel. Fits and convulsions come next in the order of frequency. Several of the sudden deaths happened in the course of chronic diseases, but the cases of consumption occurred principally among criminals in the prisons, and were not sudden deaths. In 1087 other cases which occurred in the metropolis (1839), the deaths were ascribed to apoplexy 84 times, convulsions 17 times, epilepsy 10 times, heart diseases 36 times, and rupture of a blood-vessel 36 times. The verdicts, 'visitation of God,' or 'natural death,' were returned 632 times in the 1087 inquests, not comprising violent deaths.

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* *Annuaire de France*, 1839.

"No definition of the sense in which 'sudden death' is practically understood by the coroners has been given; nor can we describe in any precise terms the class of cases, exclusive of violent deaths, which are comprised in the abstracts of inquests. The writers even on medical jurisprudence do not state with any strictness what they mean by sudden deaths—whether it be death in 10 minutes, 10 hours, or 10 days; but it is generally applied to cases where persons, previously able to attend to business, are suddenly deprived of consciousness, and expire in less than 25 hours. Understood in this sense, it is the popular opinion that 'sudden death' is the result of apoplexy, when it is not produced by violence. The recent researches of M. Devergie prove that the opinion is a popular error; and if M. Devergie's theory be rejected, his facts prove satisfactorily that the 'apoplectic theory' rests on no solid grounds. Many of the verdicts which ascribe 'sudden death' to apoplexy must be erroneous."

In Paris, as is well known, all bodies found dead and not recognized are conveyed to a place called the *morgue*, where they and their clothes are carefully kept and exhibited for the purpose of recognition by their friends or other persons. The medical director of the morgue is M. Devergie, who has the most ample opportunities for investigating the causes of sudden deaths, which, after Bichat, he refers to the three principal organs;—the lungs, brain, and heart.

"In death by the lungs, the circulation is stopped primarily in those organs; the pulmonary artery, the right cavities of the heart, and the *venæ cavæ* are gorged with blood. The pulmonary veins, the left cavities of the heart, and the aorta are empty, or contain an infinitely small portion of blood. In death by the brain (apoplexy), the respiration is embarrassed, the lungs congested, and then the heart ceases to beat; the meningeal veins are gorged with blood; the lungs contain a considerable quantity; there is blood in both sides of the heart, but most in the right cavites. If death begin at the heart, (*syncope*, fainting), its action ceasing all at once, the cavities are full on both sides, not as they are in the state of accumulation, but as in the ordinary state of the circulation; there is blood in the arteries and veins. Neither the lungs nor the brain are congested. This is a brief summary of the results of M. Devergie's researches. The term congestion is vague, and by no means unobjectionable; but it is often all that is found in violent death by asphyxia, and it has something like a specific meaning in M. Devergie's essay; who reports several cases at length, which medical witnesses will do well to consult.

"The following is a summary of 40 cases of sudden death, carefully examined by the medical director of the *morgue*:*—

"Apoplexy, with a clot in the annular protuberance, 1; meningeal apoplexy, 3; serous apoplexy and pulmonary congestion, 2; congestion of the brain and spinal marrow, 3; pulmonary congestion, 12; pulmonary and cerebral congestion, 12; hæmatemesis, 2; syncope, 3; rupture of the heart, 1; rupture of the pulmonary artery, 1."

Although the coroner's inquest was instituted at a time when homicide was a much more frequent cause of death than at present, and hence was undoubtedly intended to detect deaths from such a source, the custom now is by no means confined to this legitimate purpose. This may be inferred from the fact that of 35,000 inquests held in two years, 1838-9, only 156 murders were registered. There was, moreover, but one verdict of murder to 224 inquests. According to the criminal returns, 121 offenders were tried for murder in 1838-9, of which

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[*] *Médecine Légale*, tom. i. p. 66.

number only 37 were convicted, and 15 were executed. The number of deaths by manslaughter was inconsiderable.

"The primary question in every inquest unquestionably is:—Was the death the result of homicide? And even this can only be satisfactorily answered by strictly complying with the provision of the Registration Act, and inquiring into the particulars of the actual cause of death. Exclusive of the use of the deodand in preventing accidents, however, the principal utility of the inquest is the security which it affords the public mind; and its tendency to prevent crime, by convincing the evil-minded that murder cannot be committed with any chance of impunity. But inquests, in which the 'cause of death' is not inquired into, can neither inspire criminals with dread, nor the public with confidence. The most important part of the evidence of the inquest is omitted, when the 'cause of death' is not investigated. The expense of inquests, which is now not considerable, would be slightly augmented; but the value of the information, and the use of the inquiry, would be increased in an infinitely greater degree. The legislature, moreover, has left the coroners no discretion upon this matter. The juries are bound by the Act to inquire into the particulars required by you; and the coroners are bound to supply the registrars with the results—comprising an intelligible statement of the 'cause of death,' so far as it can be ascertained. The inquests in England will, henceforward, be as efficient as similar inquiries in France or Germany; and be placed on a level with the present state of medical jurisprudence,—to contribute to that branch of science an immense number of new, well-authenticated, and instructive facts."

Deaths in the London Hospitals.—Separate abstracts have been made of the causes of death in the London hospitals,—13 in number, the mortality in which within the year, amounted to 2491, 1729 of which were males, and 762 females. The number of patients admitted is not stated. The mortality in the hospitals, constitutes 5½ per cent. of the total deaths in the metropolis.

Deaths from Diseases in Towns and in the open Country.—The general principles bearing upon this highly interesting subject have been discussed in the former reports, where the particular circumstances or agencies believed to increase the mortality of towns, and dense populations of every kind are referred to. A table is presented, showing the results of two years' observations (1838-9) combined. The number of deaths by different causes in the metropolis, and twenty-four principal towns or city districts, as contrasted with the deaths from the same causes in counties containing a less dense population, chiefly engaged in agriculture.

	Area in square miles.	Estimated population Jan. 1, 1840.	Deaths registered in 2 years.	Inhabitants to one square mile.	Annual mortality per cent.
Country Districts,	17,254	3,559,323	129,628	206	1.821
Town Districts,	747	3,769,002	197,474	5,045	2.620

This difference is greater than that given in the calculation, founded on the facts observed in 1838, when the deaths in Bristol, Clifton, and Norwich, were (by error) not subtracted from the deaths in the counties of Gloucestershire and Norfolk. The mortality in the town districts declined, however, in 1839, more than the mortality in the country districts.

Deaths of Children.—The diseases chiefly incidental to childhood, are twice as fatal in the town districts as they are in the country. This is strikingly exhibited in the following condensed statement.

	Deaths in 1,000,000 living in the Country.	Towns.
By Hydrocephalus, Cephalitis, - - - -	419	1071
" Convulsions, Teething, - - - - -	942	2586
" Pneumonia, - - - - - - - - - - -	905	2028
" Smallpox, Measles, Scarlatina, Hooping-cough, Croup,	1999	4014

Deaths of Old Persons.—The deaths by several diseases, of old age, were almost equally numerous in the towns and the country. Asthma, it will however be seen, forms an exception.

	Deaths in 1,000,000 living in the Country.	Towns.
Old Age,	2446	1922
Paralysis,	333	334
Apoplexy,	374	409
Asthma,	182	645

It must be borne in mind, that the number of children and old people *living* in the towns is less than in the country districts; while the number of persons in the middle of life, is proportionally greater in the towns than in the country.

It will be seen by the following table, that several diseases very frequently fatal, occurring between the ages of 15 and 60, were from 25 to 50 per cent. more fatal in the town than in the country districts.

	Deaths registered in the		
	Country Districts.	Town Districts.	Excess of Deaths in Towns.
Typhus,	6,462	10,582	55 per cent.
Consumption,	24,094	32,436	24 " "
Hepatitis and Diseases of the Liver,	1,085	1,623	38 " "
Diseases of Childbearing,	909	1,560	59 " "
Rheumatism,	324	531	52 " "
Paramenia,	19	35	70 " "

The tendency to consumption, it will thus be seen, is increased 24 per cent., and to typhus 55 per cent., in the town districts; but as the absolute mortality from consumption is three times as great as from typhus in towns, and nearly four times as great in the country, the excess of deaths by consumption, caused by the insalubrity of towns, is greater than the excess of deaths by typhus—a fact which has hitherto been overlooked. Thus, 24,094 deaths from consumption occurred in the country, 32,436 in the town districts; the excess amounted to 8342 deaths; 6204 deaths from typhus occurred in the country, 10,852 in the town districts; the excess amounted to 4450 deaths. These facts, Mr. Farr thinks, show the propriety of the ordinary medical advice to place persons of a consumptive habit in a pure atmosphere; but they militate against sending them to reside in the continental towns, in many of which the mortality is as high as it is in Bethnel Green and Whitechapel. Paramenia, (mismenstruation), though rarely fatal, is a very common disease, and one which greatly embarrasses the medical practitioner. The facts in the table point out the utility of the country watering-places to patients afflicted with the complaint in cities. The excess of deaths by childbirth in the town districts is striking. Out of nearly the same number of deliveries, 909 mothers died in the country, 1560 in the town districts.

Referring to the mortality in the metropolis, and the means by which this is diminished or increased, Mr. Farr observes that—

"The mortality increases, *cæteris paribus*, as the density of the effluvial poison generated in cities, and not strictly as the density of the population. The indigence of the inhabitants, or an insufficiency of proper food—even when not carried to the extent of starvation or famine—has also a decided effect on the production of effluvial poisons, as well as on the tendency to diseases of every kind. Hence the mortality is not always greatest in the densest parts of cities.

"This principle explains the facts that, although the mortality is increased 44 per cent. by the present condition of the towns in England—where the proportion of town population is greater than in any other country in Europe, except Belgium,—the mortality of the nation has been much below the average during the whole of the present century; and, up to the present day, the expectation of life remains higher in England than in the rest of Europe. The industry and intelligence that have created flourishing towns, have ameliorated, though not so rapidly as they might have done, the sanitary condition of the people.*

Diseases of different parts of the country.—The causes of death in each county, and in each of 324 divisions of England and Wales, are given in a series of tables which have been framed upon precisely the same plan as the corresponding tables in the last report. The mortality in 1839 by 12 classes of causes is stated, distinguishing that from small-pox, measles, scarlatina, hooping-cough, typhus, and consumption, within the districts of the metropolis, Wales, and nine groups of counties. The divisions are arranged in the order of their mean mortality.

Influence of the Seasons.—For the purpose of ascertaining the exact influence of the seasons upon the duration of human life, it is generally requisite to make allowances for the operation of accidental occurrences; such as unusual scarcity or abundance, prevalence of epidemics, &c. Mr. Farr informs us, that he thinks the great English metropolis presents a series of facts which enable us to dispense, to a certain extent, with such difficult corrections.

"It would," he observes, "perhaps be vain to expect less fluctuation in the condition of any large mass of people, than has been experienced by the population of the metropolis within the last 3½ years, ending in June, 1841: hence, for the present purpose, the mortality, from the pressure of privation, may be fairly considered to have been nearly invariable within that period, and to have exhibited fluctuations, directly or indirectly dependent on the seasons, if we except the results of improvements going on in the sewerage, and the decline of the epidemics of small-pox and typhus."

A statement is given of the deaths registered in the various seasons for three years, the number of deaths being corrected on the assumption that each season of three months embraced 275 days. The number of deaths for the respective seasons is compared with the mean temperature by Fahrenheit's scale, and the fact of the increase of mortality with the increase of cold, and its diminution with increase of warmth is strikingly demonstrated.

	3 Winters. Jan. Feb. March.	3 Springs. April, May, June.	3 Summers. July, Aug. Sept.	3 Autumns. Oct. Nov. Dec.
Deaths,	39,764	35,128	33,677	36,684
Temperature, (Fahr.)	39°.8	53°.8	61°.0	44°.6

The causes of death which proved the most fatal in the cold months belong principally to the pulmonary class and the cerebral diseases of the aged; those which proved most fatal in summer belong to the diseases of the bowels. The two classes of diseases, over the fatality of which temperature exercised the most marked influence, are represented with their respective proportions in the following statement:—

Causes of Death.	Winter.	Spring.	Summer.	Autumn.
Diseases of the Respiratory Organs.	12,140	9,890	8,433	11,008
Diseases of the Digestive Organs.	1,982	2,139	2,978	2,263

Of the diseases in the epidemic class, influenza and hooping-cough followed

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* The annual rate of mortality per cent., exclusive of still-born, in some of the great European states, is as follows:—

	Years.	Per cent.
Prussia,	1820—34	2.10
France,	1817—36	2.52
Sweden,	1810—29	2.46
England and Wales,	1838—39	2.17

the same law as the pulmonary; cholera, dysentery, diarrhœa and thrush, as the abdominal affections. The mortality from hooping-cough was 1674 for the three winter months, 1208 for spring, 644 for summer, and 787 for autumn.

From what has already been observed, it is rendered highly probable that many cases, arranged under the heads of apoplexy and sudden death, are the effects of congestions in the lungs—a sort of spontaneous asphyxia—remarks Mr. Farr, the development of which appears to be favoured by a temperature below the freezing point of water.*

Persons affected by the following diseases died in greatest numbers when the temperature was low.

Causes of Death.	Winter.	Spring.	Summer.	Autumn.	Causes of Death.	Spring.	Summer.	Autumn.	Winter.
Apoplexy . . .	801	627	626	695	Nephritis . . .	19	17	14	19
Sudden Death .	618	524	381	547	Diabetes	19	12	7	15
Paralysis . . .	647	520	485	602	Dropsy	1403	1286	1135	1457
Insanity . . .	73	45	35	42					
Tetanus . . .	23	11	15	19	Diseases of Childbed	310	261	217	309
Asthma . . .	1733	642	344	1080	Phlegmon . . .	9	2	3	1
Bronchitis . .	495	307	191	347	Ulcer	23	16	9	13
Pneumonia . .	3326	2454	1827	3600					
Pleurisy . . .	70	62	39	50	Mortification . .	217	177	153	171
Hydrothorax .	272	183	136	206	Old Age	3437	2609	2150	2814
Disease of Heart	739	556	571	698	Starvation . . .	21	16	7	20
Rheumatism . .	124	113	99	117	Violent Deaths .	996	989	883	924

The mortality from the following named diseases appears but little affected by the range of temperature of the seasons.

Causes of Death.	Winter.	Spring.	Summer.	Autumn.
Hydrocephalus,	1370	1330	1348	1231
Convulsions,	2414	2298	2532	2119
Consumption,	5600	5778	5501	5148
Scrofula,	72	64	72	54
Cancer,	276	230	264	262

Mr. Farr asks the questions—at what degree of cold does the mortality begin to rise? and how soon after the cold weather has set in are its effects experienced? The weekly tables of mortality furnished by him afford replies to these questions.

"Meteorologists have observed that the mean temperature of October represents very nearly the mean temperature of the year and the place; and the facts in the table show that the mortality rises progressively, as the mean temperature falls below the *mean temperature* of London (50°.5); the deaths in the week rising to 1000 and upwards when the *temperature* of night falls below the freezing point of water, and to 1200 when the *mean temperature* of day and night descends a degree or two lower than 32°.

"The rise in the mortality is immediate, but the effects of the low temperature go on accumulating, and continue to be felt 30 or 40 days after the extremities of the cold have passed away. The cold destroys a certain number of persons rapidly, and in others occasions diseases which prove fatal in a month or six weeks."

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* The rate of mortality of the months and seasons in England is just the reverse of what it has been found to be in Philadelphia, where the bills of mortality are the most swelled in the summer months. See Amer. Journ. Med. Sci. 1827, p. 129.

The relation of the temperature and mortality is distinctly shown in a table given by Mr. Farr, where accidental irregularities are diminished by extending the number and the period of the observations. The practical lesson taught by these facts is, as Mr. Farr observes, obvious. A great number of the aged, and those afflicted with difficulty of breathing, whether it arises from emphysema, chronic bronchitis, diseased heart, or impairment of the function of respiration, cannot resist cold sunk so low as 32°. The temperature of the atmosphere in which they sleep can never safely descend lower than 40°; for if the cold that freezes water in their chamber does not freeze their blood, it impedes respiration, and life ceases when the blood-heat has sunk a few degrees below the standard. So far as statistical investigation has hitherto gone, temperature, Mr. Farr thinks, appears to have no influence on the fatality of consumption (tubercular phthisis); while it exercises a well-defined influence in emphysema, and in the inflammatory diseases of the chest. G. E.

Art. XXVIII.—*A Treatise on the Diseases of the Heart and Great Vessels, and on the affections which may be mistaken for them. Comprising the Author's view of the Physiology of the Heart's Action and Sounds, as demonstrated by his Experiments on the Motions and Sounds in* 1830, *and on the Sounds in* 1834–5. By J. Hope, M. D., F. R. S., of St. George's Hospital; formerly Senior Physician to the Marylebone Infirmary; Extraordinary Member, and formerly President, of the Royal Medical Society of Edinburgh, &c. First American from the third London edition. With Notes and a Detail of recent Experiments. By C. W. Pennock, M. D., Attending Physician to the Philadelphia Hospital, Blockley. Philadelphia: Lea & Blanchard, 1842: 8vo. pp. 572, plates ix.

It is not a little gratifying to be able to introduce to the notice of our readers an American edition of so important a work as that of Dr. Hope on the diseases of the heart, and especially one enriched as the present is by the valuable additions of an editor, whose ardent and successful devotion to the investigation of this class of affections eminently qualifies him for the undertaking. The additions made by Dr. Pennock are for the most part the result of his own personal observation, whilst at the same time extracts from the writings of others have been introduced with the view of giving a more accurate account of existing opinion in reference to certain questions.

In the chapter on the anatomy of the heart, Dr. P. has introduced a very precise description, derived from his own observation, of the relative position of the various portions of the organ. The only fixed point, he conceives, to be at the valves of the aorta, whose position he has found, by repeated experiments, to be such that they are pierced by needles introduced perpendicular to the plane of the sternum through the middle of that bone opposite the middle of the cartilages of the third ribs. According to Dr. Hope, their situation is somewhat lower down.

The second chapter contains an account of those experimental researches of the author upon the heart's action which have exerted so important an influence upon the study of its pathology. The conclusions thus arrived at have been in the main confirmed by the late experiments of Drs. Pennock and Moore, an account of which, as well as of the still more recent ones made by the London committee of the British Association, has been introduced by the editor. By the kindness of Dr. Pennock, the writer of this had an opportunity of witnessing some of the experiments instituted by that gentleman, and was highly gratified with their satisfactory and decisive results. In most respects, as before mentioned, they are confirmatory of those of Dr. Hope. Both agree as regards the order of the heart's movements, the auricular contraction taking place first, then the ventricular, which is followed by the period of repose. This view of